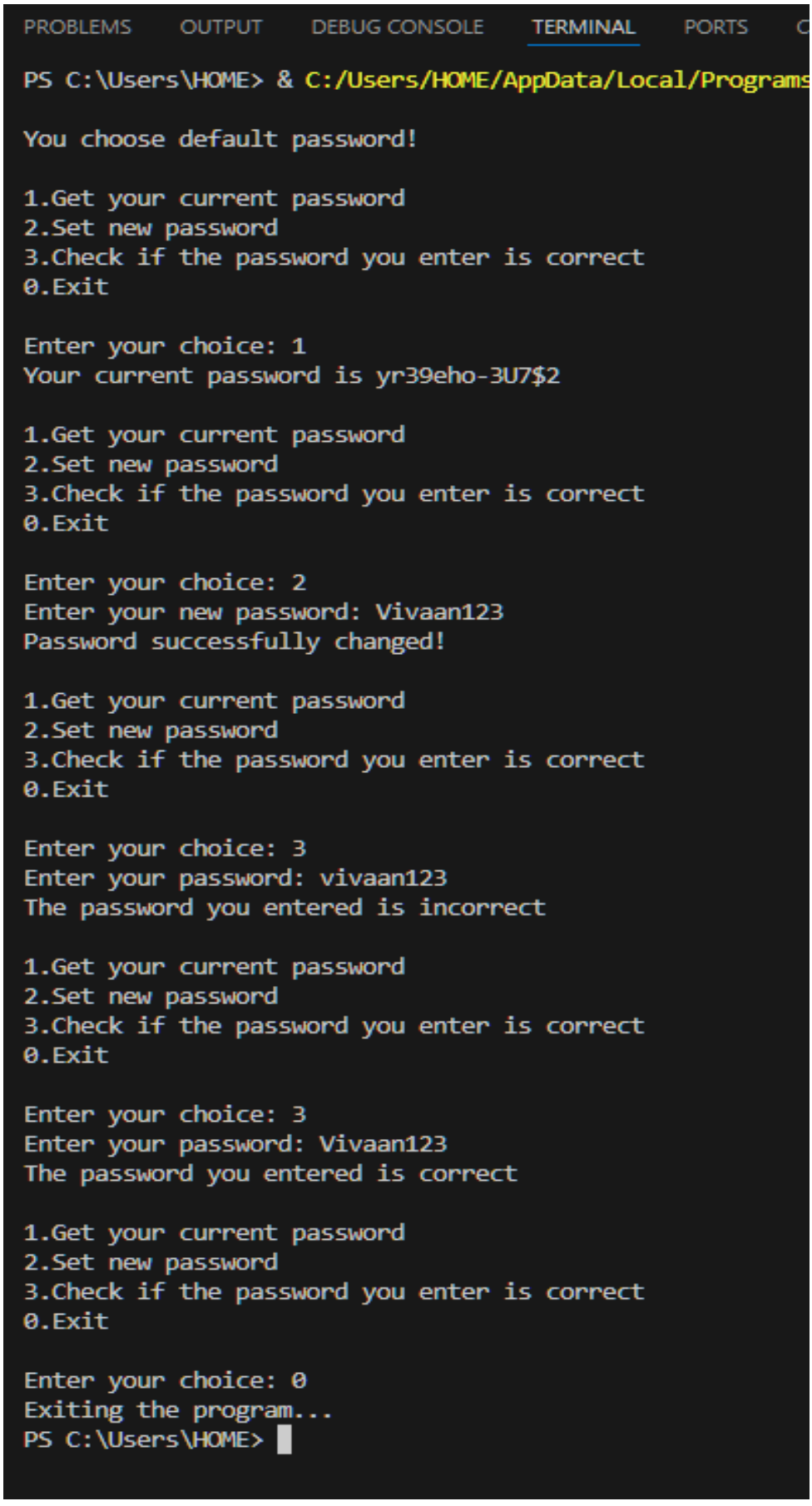
```
DEFAULT_PASSWORD = "yr39eho-3U7$2"

class PasswordManager:
    def __init__(self, password = DEFAULT_PASSWORD):
        self.old_passwords = []

        if password == "yr39eho-3U7$2":
            print("\nYou choose default password!\n")

        (self.old_passwords).append(password)
        self.current_password = self.old_passwords[-1]
        return None

    def is_true(self, password):
        if password == self.current_password:
            return True
        else:
            return False

    def get_password(self):
        print(f"Your current password is {self.current_password}\n")
        return self.current_password

    def set_password(self, password):
        for old_password in self.old_passwords:
            if old_password == password:
                print("Your new password cannot be same as one of your old passwords!\n")
                return None
        self.old_passwords.append(password)
        self.current_password = self.old_passwords[-1]
        print("Password successfully changed!\n")
```

```
        return None


user = PasswordManager()
choice = -1
while choice != 0:
    print("1.Get your current password\n2.Set new password\n3.Check if the password you enter is correct\n0.Exit\n")
    choice = int(input("Enter your choice: "))
    if choice == 1:
        user.get_password()
    elif choice == 2:
        password = str(input("Enter your new password: "))
        user.set_password(password)
    elif choice == 3:
        password = str(input("Enter your password: "))
        correct = user.is_true(password)
        if correct:
            print("The password you entered is correct\n")
        else:
            print("The password you entered is incorrect\n")
    elif choice == 0:
        print("Exiting the program...")
        exit(0)
    else:
        print("Please enter a valid number!\n")
```

Output:

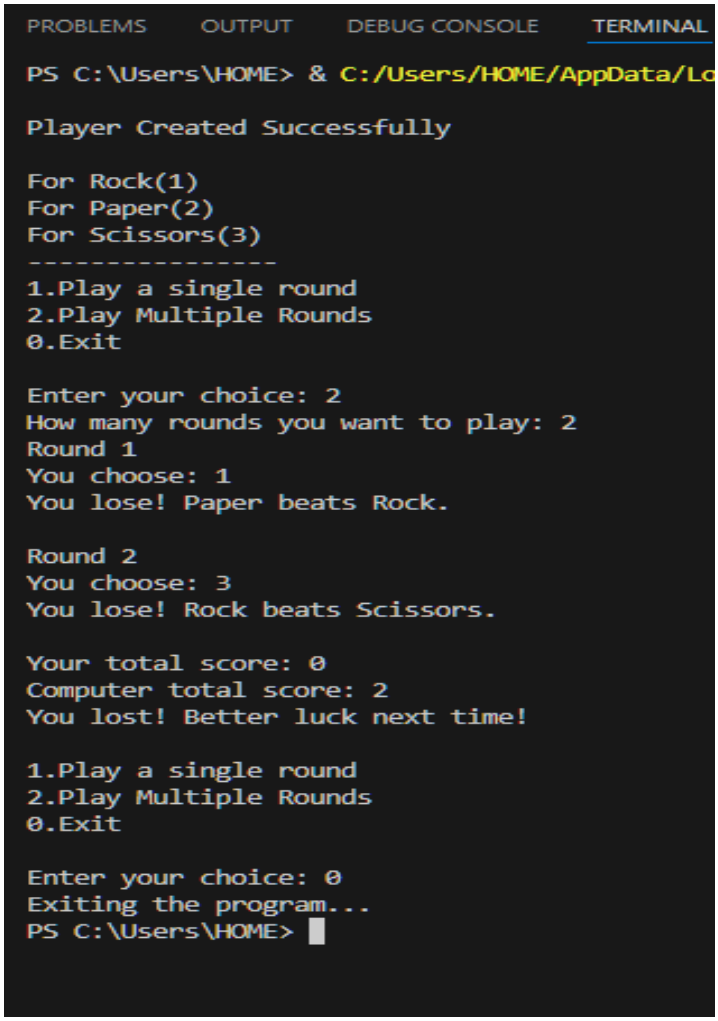

PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
PS C:\Users\HOME> & C:/Users/HOME/AppData/Local/Programs
You choose default password!
1.Get your current password
2.Set new password
3.Check if the password you enter is correct
0.Exit
Enter your choice: 1
Your current password is yr39eho-3U7$2
1.Get your current password
2.Set new password
3.Check if the password you enter is correct
0.Exit
Enter your choice: 2
Enter your new password: Vivaan123
Password successfully changed!
1.Get your current password
2.Set new password
3.Check if the password you enter is correct
0.Exit
Enter your choice: 3
Enter your password: vivaan123
The password you entered is incorrect
1.Get your current password
2.Set new password
3.Check if the password you enter is correct
0.Exit
Enter your choice: 3
Enter your password: Vivaan123
The password you entered is correct
1.Get your current password
2.Set new password
3.Check if the password you enter is correct
0.Exit
Enter your choice: 0
Exiting the program...
PS C:\Users\HOME>

```
import random


class RockPaperScissors:
    def __init__(self):
        print("\nPlayer Created Successfully\n\nFor Rock(1)\nFor Paper(2)\nFor Scissors(3)\n----------
-")
        return None

    choice = {1: "Rock", 2: "Paper", 3: "Scissors"}

    def single_round(self):
        player_choice = int(input("You choose: "))
        while player_choice not in [1, 2, 3]:
            player_choice = int(input("Please enter a choice from 1,2,3 only: "))
        computer_choice = self.get_computer_choice()

        self.round_winner(player_choice, computer_choice)

    def multiple_rounds(self,n):
        player_score = 0
        computer_score = 0
        for i in range(1,n+1):
            player_choice = int(input(f"Round {i}\nYou choose: "))
            while player_choice not in [1, 2, 3]:
                player_choice = int(input("Please enter a choice from 1,2,3 only: "))
            computer_choice = self.get_computer_choice()
            player_wins = self.round_winner(player_choice, computer_choice)
            if player_wins:
                player_score += 1
            else:
                computer_score += 1
```

```
        self.game_winner(player_score, computer_score)

    def get_computer_choice(self):
        computer_choice = random.randint(1,3)
        return computer_choice

    def round_winner(self,player_choice, computer_choice):
        if player_choice == computer_choice:
            print(f"You both choose {self.choice[player_choice]}. It's a Tie\n")
            return None
        elif (player_choice == 1 and computer_choice == 3) or \
             (player_choice == 2 and computer_choice == 1) or \
             (player_choice == 3 and computer_choice == 2):
            print(f"You win! {self.choice[player_choice]} beats {self.choice[computer_choice]}.\n")
            return True
        else:
            print(f"You lose! {self.choice[computer_choice]} beats {self.choice[player_choice]}.\n")
            return False

    def game_winner(self, player_score, computer_score):
        print(f"Your total score: {player_score}\nComputer total score: {computer_score}")
        if player_score > computer_score:
            print("Congratulations! You won the game!\n")
        elif player_score == computer_score:
            print("Game Tied!\n")
        else:
            print("You lost! Better luck next time!\n")
        return None

player = RockPaperScissors()
choice = -1
```

```
while choice != 0:
    choice = int(input("1.Play a single round\n2.Play Multiple Rounds\n0.Exit\n\nEnter your choice: "))
    if choice == 1:
        player.single_round()
    elif choice == 2:
        n = int(input("How many rounds you want to play: "))
        player.multiple_rounds(n)
    elif choice == 0:
        print("Exiting the program...")
        exit(0)
    else:
        print("Please enter a valid number!\n")
```

Output:



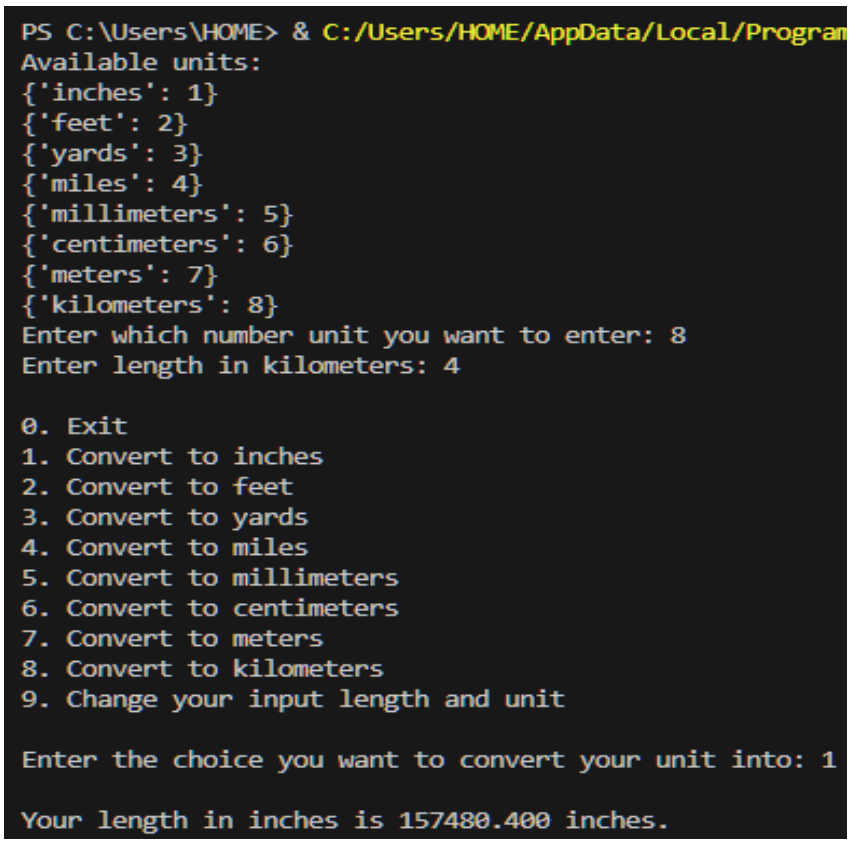
```
class Converter:

    def __init__(self, length = 0, unit = ""):
        self.length = length
        self.unit = unit
        self.convert_to_inch()

    conversion_factors_from_inches = {
        "inches": 1,
        "feet": 12,
        "yards": 36,
        "miles": 63360,
        "millimeters": 0.0393701,
        "centimeters": 0.393701,
        "meters": 39.3701,
        "kilometers": 39370.1,
    }

    def convert_to_inch(self):
        if self.unit in self.conversion_factors_from_inches:
            self.length *= self.conversion_factors_from_inches[self.unit]
            self.unit = "inches"

    def inches(self):
        return self.length / self.conversion_factors_from_inches["inches"]

    def feet(self):
        return self.length / self.conversion_factors_from_inches["feet"]

    def yards(self):
        return self.length / self.conversion_factors_from_inches["yards"]
```

```
    def miles(self):
        return self.length / self.conversion_factors_from_inches["miles"]

    def millimeters(self):
        return self.length / self.conversion_factors_from_inches["millimeters"]

    def centimeters(self):
        return self.length / self.conversion_factors_from_inches["centimeters"]

    def meters(self):
        return self.length / self.conversion_factors_from_inches["meters"]

    def kilometers(self):
        return self.length / self.conversion_factors_from_inches["kilometers"]

units = [{"inches": 1}, {"feet": 2}, {"yards": 3}, {"miles": 4}, {"millimeters": 5}, {"centimeters": 6},
{"meters": 7}, {"kilometers": 8}]
print("Available units:")
for unit in units:
    print(unit)

unit_choice = int(input("Enter which number unit you want to enter: "))
while unit_choice > 8 or unit_choice < 1:
    unit_choice = int(input("Please enter a number between (1-8): "))
unit = list(units[unit_choice - 1].keys())[0]
length = float(input(f"Enter length in {unit}: "))
length_and_unit = Converter(length, unit)

choice = -1
while choice != 0:
```

```
print("\n0. Exit")
print("1. Convert to inches")
print("2. Convert to feet")
print("3. Convert to yards")
print("4. Convert to miles")
print("5. Convert to millimeters")
print("6. Convert to centimeters")
print("7. Convert to meters")
print("8. Convert to kilometers")
print("9. Change your input length and unit\n")

choice = int(input("Enter the choice you want to convert your unit into: "))

if choice == 0:
    print("Exiting the program...")
    break

elif choice == 1:
    print(f"\nYour length in inches is {length_and_unit.inches():.3f} inches.\n")
elif choice == 2:
    print(f"\nYour length in feet is {length_and_unit.feet():.3f} feet.\n")
elif choice == 3:
    print(f"\nYour length in yards is {length_and_unit.yards():.3f} yards.\n")
elif choice == 4:
    print(f"\nYour length in miles is {length_and_unit.miles():.3f} miles.\n")
elif choice == 5:
    print(f"\nYour length in millimeters is {length_and_unit.millimeters():.3f} mm.\n")
elif choice == 6:
    print(f"\nYour length in centimeters is {length_and_unit.centimeters():.3f} cm.\n")
elif choice == 7:
    print(f"\nYour length in meters is {length_and_unit.meters():.3f} meters.\n")
```

```
    elif choice == 8:
        print(f"\nYour length in kilometers is {length_and_unit.kilometers():.3f} km.\n")


    elif choice == 9:
        print("\nChange your unit and length:")
        for unit in units:
            print(unit)
        unit_choice = int(input("Enter which number unit you want to enter: "))
        while unit_choice > 8 or unit_choice < 1:
            unit_choice = int(input("Please enter a number between (1-8): "))
        unit = list(units[unit_choice - 1].keys())[0]
        length = float(input(f"Enter length in {unit}: "))
        length_and_unit = Converter(length, unit)
    else:
        print("\nEnter a valid choice.\n")
exit(0)
```

Output:



```
Your length in inches is 157480.400 inches.


0. Exit
1. Convert to inches
2. Convert to feet
3. Convert to yards
4. Convert to miles
5. Convert to millimeters
6. Convert to centimeters
7. Convert to meters
8. Convert to kilometers
9. Change your input length and unit

Enter the choice you want to convert your unit into: 4

Your length in miles is 2.485 miles.


0. Exit
1. Convert to inches
2. Convert to feet
3. Convert to yards
4. Convert to miles
5. Convert to millimeters
6. Convert to centimeters
7. Convert to meters
8. Convert to kilometers
9. Change your input length and unit

Enter the choice you want to convert your unit into: 0
Exiting the program...
```